CONTENTS

Vol. 7, No. 1 **February 1979**

Pharmacokinetics/Pharmacodynamics of Furosemide in Man: A Review 1
Leslie Z. Benet

Role of Concentration-Dependent Plasma Protein Binding in Disopyramide Disposition 29
Peter J. Meffin, Edward W. Robert, Roger A. Winkle, Sandra Harapat, Flora A. Peters, and Donald C. Harrison

Pharmacokinetics of Digoxin: Relationship Between Response Intensity and Predicted Compartmental Drug Levels in Man 47
William G. Kramer, Albert J. Kolibash, Richard P. Lewis, Mohinder S. Bathala, James A. Visconti, and Richard H. Reuning

Time Course of Carbamazepine Self-Induction 63
Patrick J. McNamara, Wayne A. Colburn, and Milo Gibaldi

Clinical Pharmacokinetics of Procainamide Infusions in Relation to Acetylator Phenotype 69
John J. Lima, David R. Conti, Allen L. Goldfarb, William J. Tilstone, Lawrence H. Golden, and William J. Jusko

Kinetics of Biotransformation of Clonazepam to its 7-Amino Metabolite in the Monkey 87
Allen A. Lai, Bo H. Min, William A. Garland, and René H. Levy

Fitting Concentration–Time Data to Biexponential Equations 97
Doris Wong, Wayne A. Colburn, and Milo Gibaldi

A Linear Recirculation Model for Drug Disposition 101
David J. Cutler

Estimation of Tissue-to-Plasma Partition Coefficients Used in Physiological Pharmacokinetic Models 117
Hsiao-Sheng George Chen and Joseph F. Gross

Vol. 7, No. 2 **April 1979**

A Review of the Applications of Physiologically Based Pharmacokinetic Modeling 127
K. J. Himmelstein and R. J. Lutz

Comparison of the *in Vitro* and *in Vivo* Release of Digoxin from Four Different Soft Gelatin Capsule Formulations 147
J. G. Wagner, R. G. Stoll, D. J. Weidler, J. W. Ayres, M. R. Hallmark, E. Sakmar, and A. Yacobi

Single- and Multiple-Dose Kinetics of Oral Lorazepam in Humans: The Predictability of Accumulation 159
David J. Greenblatt, Marcia Divoll Allen, Dean S. MacLaughlin, David H. Huffman, Jerold S. Harmatz, and Richard I. Shader

Pharmacokinetics of Methotrexate in Solid Tumors 181
Rakesh K. Jain, James Wei, and Pietro M. Gullino

Effect of Plasma Protein and Tissue Binding on the Time Course of Drug Concentration in Plasma 195
Patrick J. McNamara, Gerhard Levy, and Milo Gibaldi

Applications of a Recirculatory Stochastic Pharmacokinetic Model: Limitations of Compartmental Models 207
D. P. Vaughan and I. Hope

Integrated Equation to Evaluate Accumulation Profiles of Drugs Eliminated by Michaelis–Menten Kinetics 227
Gilbert Lam and Win L. Chiou

Vol. 7, No. 3 **June 1979**

Bioavailability of Imipramine Tablets Relative to a Stable Isotope-Labeled Internal Standard: Increasing the Power of Bioavailability Tests 233
Henry d'A. Heck, Sidney E. Buttrill, Jr., Norman W. Flynn, Robert L. Dyer, Michael Anbar, Thomas Cairns, Shrikant Dighe, and Bernard E. Cabana

Disposition of Synthetic Glucocorticoids. I. Pharmacokinetics of Dexamethasone in Healthy Adults 249
S. Edmund Tsuei, R. George Moore, John J. Ashley, and William G. McBride

Attenuation of Furosemide's Diuretic Effect by Indomethacin: Pharmacokinetic Evaluation 265
David E. Smith, D. Craig Brater, Emil T. Lin, and Leslie Z. Benet

Sequential First-Pass Elimination of a Metabolite Derived from a Precursor 275
K. Sandy Pang and James R. Gillette

Creatinine Kinetics in the Rabbit 291
Mehdi Boroujerdi and Albert M. Mattocks

SCIENTIFIC COMMENTARY

Divergence in Pharmacokinetic Parameters of Quinidine Obtained by Specific and Nonspecific Assay Methods 303
Theodore W. Guentert, Robert A. Upton, Nicholas H. G. Holford, and Sidney Riegelman

MEETING ANNOUNCEMENTS 313

Vol. 7, No. 4 **August 1979**

Quinidine Pharmacokinetics in Man: Choice of a Disposition Model and Absolute Bioavailability Studies 315
Theodor W. Guentert, Nicholas H. G. Holford, Peter E. Coates, Robert A. Upton, and Sidney Riegelman

Pharmacokinetic Modeling of Heparin and Its Clinical Implications 331
T. J. McAvoy

Single-Dose Fasting Bioequivalence Assessment of Erythromycin Stearate Tablets in Man 355
Gerald J. Yakatan, Wesley J. Poynor, R. Gregg Harris, Alfred Martin, Robert G. Leonard, Arthur H. Briggs, and James T. Doluisio

Pharmacokinetics of Piroxicam, a New Nonsteroidal Anti-inflammatory Agent, Under Fasting and Postprandial States in Man 369
Takashi Ishizaki, Takeo Nomura, and Tohru Abe

Chlorpheniramine. II. Effect of the First-Pass Metabolism on the Oral Bioavailability in Dogs 383
Narayan K. Athanikar and Win L. Chiou

Accumulation Kinetics of Drugs with Nonlinear Plasma Protein and Tissue Binding Characteristics 397
Patrick J. McNamara, John T. Slattery, Milo Gibaldi, and Gerhard Levy

A Pharmacokinetic Model to Differentiate Preabsorptive, Gut Epithelial, and Hepatic First-Pass Metabolism 407
Wayne A. Colburn

A Method to Predict Infinity Values for Biexponential Processes 417
J. Newburger, John G. Wagner, and S. Stavchansky

Meeting Announcement 427

Vol. 7, No. 5 **October 1979**

Pharmacokinetics of Ampicillin and Its Prodrugs Bacampicillin and Pivampillicin in Man 429
Mats Ehrnebo, Sten-Ove Nilsson, and Lars O. Boréus

Pharmacokinetics of Phenylethylacetylurea (Pheneturide) an Old Antiepileptic Drug 453
Renato L. Galeazzi, Meinrad Egli, and Nils Wad

Apparent Dose-Dependent Absorption of Chlorothiazide in Dogs 463
Dennis E. Resetarits and Theodore R. Bates

Plasma Levels and β-Blocking Effect of α-Hydroxymetoprolol—Metabolite of Metoprolol—in the Dog 471
Carl-Gunnar Regårdh, Lars Ek, and Kurt J. Hoffmann

Pharmacokinetics of Clonidine in the Rat and Cat 481
L. K. Paalzow and P. O. Edlund

Multiple Receptor Responses: A New Concept to Describe the Relationship Between Pharmacological Effects and Pharmacokinetics of a Drug: Studies on Clonidine in the Rat and Cat 495
L. K. Paalzow and P. O. Edlund

Number of Exponential Terms Describing the Solution of an *N*-Compartmental Mammillary Model: Vanishing Exponentials 511
D. P. Vaughan and M. J. Dennis

Potential Pitfalls in the Conventional Pharmacokinetic Studies: Effects of the Initial Mixing of Drug in Blood and the Pulmonary First-Pass Elimination 527
Win L. Chiou

SCIENTIFIC COMMENTARY

Nonlinear Least-Squares Regression Programs for Microcomputers 537
Carl C. Peck and Berton B. Barrett

Vol. 7, No. 6 **December 1979**

Steady-State Plasma Concentrations as a Function of the Absorption Rate and Dosing Interval for Drugs Exhibiting Concentration-Dependent Clearance: Consequences for Rhenytoin Therapy 543
Ronald S. Sawchuk and Tom S. Rector

Time-Dependent Kinetics. V. Time Course of Drug Levels During Enzyme Reduction (One-Compartment Model) 557
Rene H. Levy, Martin S. Dunain, and James L. Cook

A Priori Lithium Dosage Regimen Using Population Characteristics of Pharmacokinetic Parameters 579
Jean Gaillot, Jean-Louis J. Steimer, Alain J. Mallet, Jean J. Thibault, and Albert Bieder

Drug Elimination Interactions: Analysis Using a Mathematical Model 629
Richard H. Luecke and Walter D. Wosilait

Interaction of Phenylbutazone with Racemic Phenprocoumon and Its Enantiomers in Rats 643
Willy Schmidt and Eberhard Jähnchen

Regional and Systemic Serum Concentrations of 5-Fluorouracil After Portal and Intravenous Infusion: An Experimental Study in Dogs 665
Bengt G. Gustavsson, Åke Brandberg, Carl G. Regårdh, and Olle E. Malmersjö

Nonlinear Regression on Multiple-Dose Data 675
John R. Howell

LETTER TO THE EDITOR

Curve Fitting and Modeling in Pharmacokinetics: All Programs Are Equal, But Some Programs Are More Equal Than Others 681
Herman P. Wijnand and Cornelis J. Timmer

EDITORIAL COMMENT

Curve Fitting and Modeling in Pharmacokinetics 685
Keith Muir and Sidney Riegelman

MEETING ANNOUNCEMENT 689

Author Index to Volume 7 691
Subject Index to Volume 7 693